LISTE DE SEQUENCES

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Phe Leu Lys Leu Glu Val Glu Ala Glu Ile Asp Gln Ala Asp Tyr Ser 785 790 795 800 790 Val Phe Thr Gln Gln Pro Leu Glu Glu Glu Met Asp Ser Lys Ser Phe Asp Glu Met Glu Gln Ser Leu Leu Ile Leu Ser Glu Thr Lys Ala Ser Leu Val Ser Thr Met Ser Leu Trp Lys Gln Gln Met Tyr Thr Ile Ala Lys Phe His Phe Phe Thr Leu Lys Arg Glu Ser Lys Ser Val Arg Ser Val Leu Leu Leu Leu Ile Phe Phe Thr Val Gln Ile Phe Met Phe 870 Leu Val His His Ser Phe Lys Asn Ala Val Val Pro Ile Lys Leu Val 890 Pro Asp Leu Tyr Phe Leu Lys Pro Gly Asp Lys Pro His Lys Tyr Lys 900 905 910 Thr Ser Leu Leu Gln Asn Ser Ala Asp Ser Asp Ile Ser Asp Leu Ile Ser Phe Phe Thr Ser Gln Asn Ile Met Val Thr Met Ile Asn Asp Ser Asp Tyr Val Ser Val Ala Pro His Ser Ala Ala Leu Asn Val Met 960 950 His Ser Glu Lys Asp Tyr Val Phe Ala Ala Val Phe Asn Ser Thr Met 965 970 975 Val Tyr Ser Leu Pro Ile Leu Val Asn Ile Ile Ser Asn Tyr Tyr Leu Tyr His Leu Asn Val Thr Glu Thr Ile Gln Ile Trp Ser Thr Pro Phe 1000 Phe Gln Glu Ile Thr Asp Ile Val Phe Lys Ile Glu Leu Tyr Phe Gln 1015 Ala Ala Leu Leu Gly Ile Ile Val Thr Ala Met Pro Pro Tyr Phe Ala 1040 1035 1030 1025 Met Glu Asn Ala Glu Asn His Lys Ile Lys Ala Tyr Thr Gln Leu Lys 1050 1045

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Leu Ala Phe His Tyr Gly Leu Tyr Phe Tyr Thr Val Lys Phe Leu Ala 1090 1095 1100

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Tyr Ile Ala Ser Phe Thr Phe Lys Lys Ile Leu Asn Thr Lys Glu Phe 1125 1130 1135

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Glu Ile Thr Phe Phe Met Gly Tyr Thr Ile Ala Thr Ile Leu His Tyr 1155 1160 1165

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Cys Gln Cys Cys Glu Glu Lys Pro Ser Ile Met Val Ser Asn Leu His 1285 1290 1295

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Thr Thr His Tyr Met Glu Glu Ala Glu Ala Val Cys Asp Arg Val Ala 1490 1495 1500

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Lys Leu Glu Glu Ala Lys His Ala Phe Ala Ile Glu Glu Tyr Ser Phe 1585 1590 1595 1600

Ser Gln Ala Thr Leu Glu Gln Val Phe Val Glu Leu Thr Lys Glu Gln 1605 1610 1615

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Ser Ser Met Arg Asn Val Gln Phe Pro Gly Met Ala Pro Gln Asn Leu 50 60

Gly Arg Val Asp Lys Phe Asn Ser Ser Ser Leu Met Val Val Tyr Thr 65 70 75 80

Pro Ile Ser Asn Leu Thr Gln Gln Ile Met Asn Lys Thr Ala Leu Ala 85 90 95

Pro Leu Leu Lys Gly Thr Ser Val Ile Gly Ala Pro Asn Lys Thr His

Met Asp Glu Ile Leu Leu Glu Asn Leu Pro Tyr Ala Met Gly Ile Ile 115 120 125

Phe Asn Glu Thr Phe Ser Tyr Lys Leu Ile Phe Phe Gln Gly Tyr Asn 130 135 140

Ser Pro Leu Trp Lys Glu Asp Phe Ser Ala His Cys Trp Asp Gly Tyr 145 150 155 160

Gly Glu Phe Ser Cys Thr Leu Thr Lys Tyr Trp Asn Arg Gly Phe Val 165 170 175

Ala Leu Gln Thr Ala Ile Asn Thr Ala Ile Ile Glu Ile Thr Thr Asn 180 185 190

His Pro Val Met Glu Glu Leu Met Ser Val Thr Ala Ile Thr Met Lys 195 200 205

Thr Leu Pro Phe Ile Thr Lys Asn Leu Leu His Asn Glu Met Phe Ile

210 215 220

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Phe Met Lys Leu Glu Gly Gln Ser Thr Ile Glu Gln Asp Phe Glu Gln Val Glu Met Ile Arg Asp Ser Glu Ser Leu Asn Glu Met Glu Leu Ala 805 810 815 His Ser Ser Phe Ser Glu Met Gln Thr Ala Val Ser Asp Met Gly Leu 825 Trp Arg Met Gln Val Phe Ala Met Ala Arg Leu Arg Phe Leu Lys Leu 840 835 Lys Arg Gln Thr Lys Val Leu Leu Thr Leu Leu Leu Val Phe Gly Ile Ala Ile Phe Pro Leu Ile Val Glu Asn Ile Ile Tyr Ala Met Leu Asn Glu Lys Ile Asp Trp Glu Phe Lys Asn Glu Leu Tyr Phe Leu Ser Pro 885 890 895 Gly Gln Leu Pro Gln Glu Pro Arg Thr Ser Leu Leu Ile Ile Asn Asn 905 Thr Glu Ser Asn Ile Glu Asp Phe Ile Lys Ser Leu Lys His Gln Asn 915 Ile Leu Leu Glu Val Asp Asp Phe Glu Asn Arg Asn Gly Thr Asp Gly 930 940 Leu Ser Tyr Asn Gly Ala Ile Ile Val Ser Gly Lys Gln Lys Asp Tyr 945 950 955 960 Arg Phe Ser Val Val Cys Asn Thr Lys Arg Leu His Cys Phe Pro Ile 965 970 975 Leu Met Asn Ile Ile Ser Asn Gly Leu Leu Gln Met Phe Asn His Thr Gln His Ile Arg Ile Glu Ser Ser Pro Phe Pro Leu Ser His Ile Gly 1005 Leu Trp Thr Gly Leu Pro Asp Gly Ser Phe Phe Leu Phe Leu Val Leu 1020 Cys Ser Ile Ser Pro Tyr Ile Thr Met Gly Ser Ile Ser Asp Tyr Lys 1035 1040 1030 Lys Asn Ala Lys Ser Gln Leu Trp Ile Ser Gly Leu Tyr Thr Ser Ala 1050 1055 Tyr Trp Cys Gly Gln Ala Leu Val Asp Val Ser Phe Phe Ile Leu Ile Leu Leu Leu Met Tyr Leu Ile Phe Tyr Ile Glu Asn Met Gln Tyr Leu 1075 1080 1085

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Tyr Ala Ala Ser Leu Val Phe Phe Ile Tyr Met Ile Ser Phe Ile Phe 1105 1110 1115 1120

Arg Lys Arg Arg Lys Asn Ser Gly Leu Trp Ser Phe Tyr Phe Phe 1125 1130 1135

Ala Ser Thr Ile Met Phe Ser Ile Thr Leu Ile Asn His Phe Asp Leu 1140 1145 1150

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Phe Pro Glu Ala Asn Phe Glu Leu Ser Ala Thr Asp Phe Leu Val Cys 1185 1190 1195 1200

Phe Ile Pro Tyr Phe Gln Thr Leu Leu Phe Val Phe Val Leu Arg Cys 1205 1210 1215

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Gly Glu Ile Leu Gly Leu Leu Gly Pro Ser Gly Ala Gly Lys Ser Ser 1315 1320 1325

Ser Ile Arg Met Ile Ser Gly Ile Thr Lys Pro Thr Ala Gly Glu Val 1330 1340 Glu Leu Lys Gly Cys Ser Ser Val Leu Gly His Leu Gly Tyr Cys Pro 1345 1350 1355 1360

Gln Glu Asn Val Leu Trp Pro Met Leu Thr Leu Arg Glu His Leu Glu 1365 1370 1375

Val Tyr Ala Ala Val Lys Gly Leu Arg Lys Ala Asp Ala Arg Leu Ala 1380 1385 1390

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Leu Ser Leu Leu Gly Asn Ser Pro Val Leu Leu Leu Asp Glu Pro Ser 1425 1430 1435 1440

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Leu Ala Glu Ala Glu Ala Leu Cys Asp Arg Val Ala Ile Met Val Ser 1480 1485

Gly Arg Leu Arg Cys Ile Gly Ser Ile Gln His Leu Lys Asn Lys Leu 1490 1495 1500

Gly Lys Asp Tyr Ile Leu Glu Leu Lys Val Lys Glu Thr Ser Gln Val 1505 1510 1515 1520

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Gln Glu Arg Tyr Ser Ser Leu Leu Thr Tyr Lys Leu Pro Val Ala Asp 1540 1550

Val Tyr Pro Leu Ser Gln Thr Phe His Lys Leu Glu Ala Val Lys His 1555 1560 1565

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Val Ser Val Asn Val Thr Gln Glu Arg Gln Tyr Ile Thr Ser Leu Met Thr Met Met Gly Leu Arg Glu Ser Ala Phe Trp Leu Ser Trp Gly Leu Met Tyr Ala Gly Phe Ile Leu Ile Met Ala Thr Leu Met Ala Leu Ile Val Lys Ser Ala Gln Ile Val Val Leu Thr Gly Phe Val Met Val Phe 290 295 300 Thr Leu Phe Leu Leu Tyr Gly Leu Ser Leu Ile Thr Leu Ala Phe Leu Met Ser Val Leu Ile Lys Lys Pro Phe Leu Thr Gly Leu Val Val Phe 330 Leu Leu Ile Val Phe Trp Gly Ile Leu Gly Phe Pro Ala Leu Tyr Thr His Leu Pro Ala Phe Leu Glu Trp Thr Leu Cys Leu Leu Ser Pro Phe Ala Phe Thr Val Gly Met Ala Gln Leu Ile His Leu Asp Tyr Asp Val Asn Ser Asn Ala His Leu Asp Ser Ser Gln Asn Pro Tyr Leu Ile Ile 390 Ala Thr Leu Phe Met Leu Val Phe Asp Thr Leu Leu Tyr Leu Val Leu 410 405 Thr Leu Tyr Phe Asp Lys Ile Leu Pro Ala Glu Tyr Gly His Arg Cys Ser Pro Leu Phe Phe Leu Lys Ser Cys Phe Trp Phe Gln His Gly Arg 440 Ala Asn His Val Val Leu Glu Asn Glu Thr Asp Ser Asp Pro Thr Pro 450 Asn Asp Cys Phe Glu Pro Val Ser Pro Glu Phe Cys Gly Lys Glu Ala Ile Arg Ile Lys Asn Leu Lys Lys Glu Tyr Ala Gly Lys Cys Glu Arg 485 Val Glu Ala Leu Lys Gly Val Val Phe Asp Ile Tyr Glu Gly Gln Ile Thr Ala Leu Leu Gly His Ser Gly Ala Gly Lys Thr Thr Leu Leu Asn

515 520 525

Ile Leu Ser Gly Leu Ser Val Pro Thr Ser Gly Ser Val Thr Val Tyr 530 540 Asn His Thr Leu Ser Arg Met Ala Asp Ile Glu Asn Ile Ser Lys Phe Thr Gly Phe Cys Pro Gln Ser Asn Val Gln Phe Gly Phe Leu Thr Val Lys Glu Asn Leu Arg Leu Phe Ala Lys Ile Lys Gly Ile Leu Pro His 580 585 590 Glu Val Glu Lys Glu Val Gln Arg Val Val Gln Glu Leu Glu Met Glu Asn Ile Gln Asp Ile Leu Ala Gln Asn Leu Ser Gly Gly Gln Asn Arg 610 615 620 Lys Leu Thr Phe Gly Ile Ala Ile Leu Gly Asp Pro Gln Val Leu Leu 625 630 635 640 Leu Asp Glu Pro Thr Ala Gly Leu Asp Pro Leu Ser Arg His Arg Ile 645 650 655 Trp Asn Leu Leu Lys Glu Gly Lys Ser Asp Arg Val Ile Leu Phe Ser Thr Gln Phe Ile Asp Glu Ala Asp Ile Leu Ala Asp Arg Lys Val Phe 675 680 685 Ile Ser Asn Gly Lys Leu Lys Cys Ala Gly Ser Ser Leu Phe Leu Lys 690 695 700 Lys Lys Trp Gly Ile Gly Tyr His Leu Ser Leu His Leu Asn Glu Arg 705 710 715 720 Cys Asp Pro Glu Ser Ile Thr Ser Leu Val Lys Gln His Ile Ser Asp 725 730 735 Ala Lys Leu Thr Ala Gln Ser Glu Glu Lys Leu Val Tyr Ile Leu Pro 740 745 750 Leu Glu Arg Thr Asn Lys Phe Pro Glu Leu Tyr Arg Asp Leu Asp Arg 755 760 765 Cys Ser Asn Gln Gly Ile Glu Asp Tyr Gly Val Ser Ile Thr Thr Leu 770 780 Asn Glu Val Phe Leu Lys Leu Glu Gly Lys Ser Thr Ile Asp Glu Ser 785 790 795 800 Asp Ile Gly Ile Trp Gly Gln Leu Gln Thr Asp Gly Ala Lys Asp Ile Gly Ser Leu Val Glu Leu Glu Gln Val Leu Ser Ser Phe His Glu Thr 825 Arg Lys Thr Ile Ser Gly Val Ala Leu Trp Arg Gln Gln Val Cys Ala Ile Ala Lys Val Arg Phe Leu Lys Leu Lys Lys Glu Arg Lys Ser Leu Trp Thr Ile Leu Leu Leu Phe Gly Ile Ser Phe Ile Pro Gln Leu Leu 880 Glu His Leu Phe Tyr Glu Ser Tyr Gln Lys Ser Tyr Pro Trp Glu Leu 885 890 895 Ser Pro Asn Thr Tyr Phe Leu Ser Pro Gly Gln Gln Pro Gln Asp Pro Leu Thr His Leu Leu Val Ile Asn Lys Thr Gly Ser Thr Ile Asp Asn 915 Phe Leu His Ser Leu Arg Arg Gln Asn Ile Ala Ile Glu Val Asp Ala Phe Gly Thr Arg Asn Gly Thr Asp Asp Pro Ser Tyr Asn Gly Ala Ile 960 Ile Val Ser Gly Asp Glu Lys Asp His Arg Phe Ser Ile Ala Cys Asn 965 970 975 Thr Lys Arg Leu Asn Cys Phe Pro Val Leu Leu Asp Val Ile Ser Asn 985 Gly Leu Leu Gly Ile Phe Asn Ser Ser Glu His Ile Gln Thr Asp Arg 1000 1005 995 Ser Thr Phe Phe Glu Glu His Met Asp Tyr Glu Tyr Gly Tyr Arg Ser Asn Thr Phe Phe Trp Ile Pro Met Ala Ala Ser Phe Thr Pro Tyr Ile 1040 1025 1030 Ala Met Ser Ser Ile Gly Asp Tyr Lys Lys Lys Ala His Ser Gln Leu 1045 Arg Ile Ser Gly Leu Tyr Pro Ser Ala Tyr Trp Phe Gly Gln Ala Leu 1060 Val Asp Val Ser Leu Tyr Phe Leu Ile Leu Leu Met Gln Ile Met 1085 1075 1080

32

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1095

1100

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Ile Pro Tyr Leu Gln Ser Val Ile Phe Leu Phe Val Ile Arg Cys Leu 1125 1130 1135

Glu Met Lys Tyr Gly Asn Glu Ile Met Asn Lys Asp Pro Val Phe Arg 1140 1145 1150

Ile Ser Pro Arg Ser Arg Glu Thr His Pro Asn Pro Glu Glu Pro Glu 1155 1160 1165

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Leu Phe Pro Gln Ala Ala Trp Gln Glu Arg Tyr Ser Ser Leu Met Ala 1460 1465 1470

Tyr Lys Leu Pro Val Glu Asp Val His Pro Leu Ser Arg Ala Phe Phe 1475 1480 1485

Lys Leu Glu Ala Met Lys Gln Thr Phe Asn Leu Glu Glu Tyr Ser Leu 1490 1495 1500

Ser Gln Ala Thr Leu Glu Gln Val Phe Leu Glu Leu Cys Lys Glu Gln 1505 1510 1515 1520

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	J J	•	-	55			

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